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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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08/962,700 11/30/97 CALDWELL

J 97020

022249
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IM62/0802

EXAMINER

LORENZO, J

ART UNIT	PAPER NUMBER
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1734

[Signature]

DATE MAILED:

08/02/00

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary	Application No. 08/962,700	Applicant(s) J. Michael Caldwell
	Examiner Jerry A. Lorengو	Group Art Unit 1734

Responsive to communication(s) filed on May 16, 2000

This action is FINAL.

Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire three (3) month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

Disposition of Claims

Claim(s) 1 and 133-197 is/are pending in the application.

Of the above, claim(s) _____ is/are withdrawn from consideration.

Claim(s) _____ is/are allowed.

Claim(s) 1 and 133-197 is/are rejected.

Claim(s) _____ is/are objected to.

Claims _____ are subject to restriction or election requirement.

Application Papers

See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

The drawing(s) filed on _____ is/are objected to by the Examiner.

The proposed drawing correction, filed on _____ is approved disapproved.

The specification is objected to by the Examiner.

The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

All Some* None of the CERTIFIED copies of the priority documents have been

received.

received in Application No. (Series Code/Serial Number) _____.

received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____.

Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

Notice of References Cited, PTO-892

Information Disclosure Statement(s), PTO-1449, Paper No(s). _____

Interview Summary, PTO-413

Notice of Draftsperson's Patent Drawing Review, PTO-948

Notice of Informal Patent Application, PTO-152

--- SEE OFFICE ACTION ON THE FOLLOWING PAGES ---

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DETAILED ACTION

(1)

Claim Rejections - 35 USC § 102

The rejection of claims 1, 133-140, 143, 144, 146-154, 160-165, 179-183, 185, and 188-197 under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 3,265,529 to Caldwell et al., as generally set forth in the office action mailed November 10, 1999, stands.

(2)

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 167-172 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 3,265,529 to Caldwell et al. in view of U.S. Patent No. 3,865,677 to Marzocchi et al.

Although Caldwell et al., in section (1), above, discloses the general method and apparatus for the placement of a polymer composition into a porous web, he does not specifically disclose that the web movement is supplied by a nip formed by two counter-rotating rollers

However, it would have been obvious to one of ordinary skill in the art to supply the web movement with a nip formed by two counter-rotating rollers motivated by the fact that Marzocchi et al., also concerned with coating and laminating apparatus, discloses that such nip drives are well known in the art and utilized to impart longitudinal tension in an elongated web-form work-piece (column 7, lines 9-16; Figure 8). Furthermore, it would have been obvious to one of ordinary skill in the art to supply either one or both of the rollers with a rubber or metal surface motivated by the fact that the roller surface determines the degree of friction that the nip can bestow upon the web being driven.

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(3)

The rejection of claims 142, 145, 155-159, and 187 are rejected under 35 U.S.C. 103(a) as being unpatentable over Caldwell et al., as set forth in sections (1) and (2), above, in further view of U.S. Patent No. 2,117,432 to Linscott, as generally set forth in the office action mailed November 10, 1999, stands.

(4)

The rejection of claims 175-178 are rejected under 35 U.S.C. 103(a) as being unpatentable over the references as combined in section (3), above, in further view of U.S. Patent No. 4,292,110 to Marteness, as generally set forth in the office action mailed November 10, 1999, stands.

(5)

Claims 141, 166, 173, 174, 184, and 186 are rejected under 35 U.S.C. 103(a) as being unpatentable over the references as combined in section (3), above, in view of U.S. Patent No. 4,630,920 to Silverberg et al., U.S. Patent No. 4,749,432 to Ando et al., and U.S. Patent No. 4,287,828 to Dahlgren.

Although the references as combined in section (3), above disclose an apparatus for the placement of a polymer composition into a porous web, they do not specifically disclose that the web is transversely tensioned during coating and curing. They also do not specifically disclose, as per applicant claims 173 and 174, that the resonance of the coating blades is damped or that, as per applicant claims 141 and 166, that the blades have a specific finish or are temperature controlled during application.

However, it would have been obvious to one of ordinary skill in the art to provide the web being coated in either a longitudinally and/or transversely tensioned manner during coating and curing motivated by the fact that such tensioning would, in-part, determine the degree to which the polymer impregnates the web during coating and the degree of openness or porosity of the finished web.

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It would have been obvious to one of ordinary skill in the art to supply the coating knives with resonance dampening motivated by the fact Silverberg et al., also drawn to blades in contact with coatings on a web, discloses blades held against the web by a resilient member (resonance dampening) which ensures constant contact to avoid blade rollover, flip, or chatter (column 5, lines 57-68; column 6, lines 1-13; figure 2) which can result in inconsistent coating and the formation of ripples.

Finally, it would have been obvious to one of ordinary skill in the art to supply the coating knives with a fine finish, as taught by Dahlgren, as well as preferentially heating or cooling the knives during coating, as taught by Ando et al., motivated by the fact that such knife parameters, in part, determine the viscosity of the polymer as it is placed within the web. That is, the knife finish would effect the shear rate and thus the viscosity of the polymer during coating while the knife temperature would effect to viscosity of the polymer by the equation below:

$$\eta = A e^{-(E/RT)}$$

where:

η = viscosity

A = constant

E = activation energy for viscous flow

R = gas constant

T = temperature

(6)

Response to Amendments and Arguments

The applicants amendments and arguments with regards to the rejection of claims 1, 133-140, 143, 144, 146-154, 160-165, 179-183, 185, and 188-197 under 35 U.S.C. 102(b) as being anticipated by Caldwell et al., have been considered but are not persuasive.

In an effort to more specifically define the instant invention over the teachings of Caldwell et al., the applicant has amended independent claims 1, 133, and 188 to recite specific limitations of the work piece acted upon by the apparatus. As set forth in the last office action, the examiner has come

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to the conclusion that the limitations drawn to the polymer and the porous web are work piece limitations.

The applicant has argued that these limitations are functional limitations and must be evaluated and considered just like any other limitation of the claim, for what it fairly conveys to a person of ordinary skill in the pertinent art in the context of which it is used. The examiner disagrees. The limitations drawn to the porous web and shear thinning of the polymer are not functional limitations because they place no functional limitations on the apparatus itself, as claimed. The apparatus, as claimed, comprises, in essence, a means for applying tension to a porous web, a means for applying a polymer composition to one surface of the web, and a means for forcing the polymer composition coated on the porous web into the body of the web itself. Thus, given these limitations, the examiner must evaluate whether a prior art apparatus would be capable of performing these functions. The examiner respectfully submits that the apparatus of Caldwell et al. *would be capable* of operating in such a matter. Thus, the rejection of claims 1, 133-140, 143, 144, 146-154, 160-165, 179-183, 185, and 188-197 under 35 U.S.C. 102(b) as being anticipated by Caldwell et al., as generally set forth in the office action mailed November 10, 1999, stands.

Finally, the applicant, in his arguments, requested that the examiner cite suitable references in order to substantiate the examiner's use of judicial notice in obviating a certain number of the applicant's claims. Specifically, the examiner has cited:

- U.S. Patent No. 3,865,677 to Marzocchi et al. in section (2), above, who teach the use of counter-rotating tensioning rollers;
- U.S. Patent No. 4,630,920 to Silverberg et al. in section (5), above, who teach resonance dampening of doctor blades to avoid blade chatter;
- U.S. Patent No. 4,749,432 to Ando et al. in section (5), above, who teach temperature of doctor blades to effect efficient coating application; and
- U.S. Patent No. 4,287,828 to Dahlgren in section (5), above, who teaches the effect of surface finish on coating blade effectiveness.

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The applicant should note that the above references have been added to the grounds of rejection merely as evidence of the prior well known statements. As such, they do not constitute a new issue and the rejection is therefore made final. See MPEP § 2144.03

(7)

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

(8)

Applicant is encouraged to **FAX After Final Amendments** (37 CFR 1.116) to expedite delivery to the Examiner. The Group 1734 Facsimile number is **(703) 305-3599**. A duplicate mailed copy of the facsimile transmission is **not required** and will only serve to delay the processing of your application.

If the applicant prefers to mail in After Final correspondence it is highly recommended that such be mailed to **BOX AF** which will also facilitate processing from the mailroom and within Group 1700.

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(9)

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Patent Examiner Jerry Lorengo whose telephone number is (703) 306-9172. The applicant should note that official communications regarding the instant application may be forwarded directly to the examiner via facsimile at (703) 305-7115.

JAL
July 30, 2000

R. Crispino

RICHARD CRISPINO
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1700